

We claim :

1. A process for fixed bed sweetening of petroleum distillates using halogenated metal phthalocyanine as a catalyst which comprises; impregnating the catalyst on activated charcoal bed by circulating alcoholic alkaline solution of the catalyst through charcoal bed till colourless solution is obtained in the effluent, passing the petroleum distillate through above said catalyst loaded charcoal bed along with air or oxygen at a temperature in the range of 20°C to 100°C and at a pressure in the range of 1 kg/cm² to 15kg/cm² with a liquid hourly space velocity in the range of 1hr⁻¹ to 15hr⁻¹ with continuous or intermittent injection of alkali solution such as sodium hydroxide of concentration in the range of 0.5-20%, to obtain the desired low mercaptan level petroleum distillates.
2. A success as claimed in claim 1, wherein the alcoholic alkaline solution used is selected from methanolic and ethanolic solution of sodium hydroxide.
3. A process as claimed in claim 1-2, wherein halogenated metal phthalocyanine catalyst used is selected from dichloro cobalt phthalocyanine and dibromo cobalt phthalocyanine.
4. A process as claimed in claim 1-3, wherein the concentration of the catalyst used in the fixed bed is in the range of 0.1 wt% to 1 wt% of activated charcoal.
5. A process as claimed in claim 1-4, wherein the halogenated metal phthalocyanine used is prepared as described and claimed in our co-pending application no. NF 260/98.

6. A process as claimed in claim 1-5 wherein the petroleum fraction used is selected from diesel, kerosene and FCC gasoline.
7. A process as claimed in claim 1-6 wherein the temperature is preferably in the range of 20°C to 50°C.
8. A process as claimed in claim 1-7 wherein the pressure is preferably in the range of 5 kg/cm² – 8 kg/cm².
9. A process as claimed in claim 1-8 wherein the liquid hourly space velocity (LHSV) is preferably in the range of 1 hr⁻¹ to 6 hr⁻¹.